

Unit 3

Day 2

Add/Subt/Mult Complex Numbers

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Adding, subtracting, and Multiplying Complex numbers

1)

$$(6 - 12i) + (11 + 3i) + (\bar{8} - 2i)$$

$$9 - 7i$$

$$2) \quad (3\sqrt{-32} - 5\sqrt{6}) - (2\sqrt{24} + 3i\sqrt{18}) - \sqrt{-98}$$

$$(12i\sqrt{2} - 5\sqrt{6}) + (4\sqrt{6} + 9i\sqrt{2}) - 7i\sqrt{2}$$

$$-9\sqrt{6} - 4i\sqrt{2}$$

$$3) (2+4i)(-3+2i)$$

$$-6 + 4i - 12i + 8i^2$$

$$-6 + 4i - 12i - 8$$

$$-8i - 14$$

$$-14 - 8i$$

$$4) (\sqrt{-8} + \sqrt{16})(\sqrt{25} - \sqrt{-50})$$

$$(2i\sqrt{2} + 4)(5 - 5i\sqrt{2})$$

$$10i\sqrt{2} - 10i^2\sqrt{2} + 20 - 20i\sqrt{2}$$

$$10i\sqrt{2} + 20 + 20 - 20i\sqrt{2}$$

$$-10i\sqrt{2} + 40$$

$$40 - 10i\sqrt{2}$$

$$5) (3 - \sqrt{-8})^2$$

$$(3 - 2i\sqrt{2})^2$$

$$(3 - 2i\sqrt{2})(3 - 2i\sqrt{2})$$

$$9 - 6i\sqrt{2} - 6i\sqrt{2} + 4i^2 \cdot 2$$

$$1 - 12i\sqrt{2}$$

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